

REMARKS

Reconsideration of the above-identified application in view of the foregoing amendments and following remarks is respectfully requested.

A. Status of the Claims and Explanation of Amendments

Claims 1-6, 17-22 and 24-31 were pending. By this paper, claims 1-5, 18-22, 24-27, and 29-30 are cancelled without prejudice or disclaimer, claims 6, 17 and 28 are amended, and new claim 32 is added.

Independent claim 17 is amended to recite a “method of manufacturing a mask for motor vehicle headlamps adapted to emit a predetermined light beam.” The language regarding “reducing parasitic light rays” in this claim is removed. The section 112 issue raised by the office action is moot. By eliminating this language from the claim, Applicants do not intend to narrow the scope of this claim. The “providing” step is amended to recite that an intermediate “component” is being provided and not the mask that ultimately results from the method. Moreover, this step is amended to recite that the component relates to a motor vehicle. In the exposure step, the language “create an optical function” is changed to “texture.” A new metallizing step is recited in this claim that occurs “after laser radiation exposure.” Finally, language is added to recite that “the textured surface of the component after metallization provides a matt zone that does not reflect light.” Support for these claim amendments is found throughout the application as originally filed, including for example at a page 9, lines 14-18 and 28-30 and page 10, lines 1-6.

Dependent claim 6 is amended to depend from claim 17, instead of claim 1.

Independent claim 28 is amended so that the phrase “reflective body” is changed to “motor vehicle reflector.” The words “transparent thermoplastic” are deleted and replaced with “plastics.” The plastic material may or may not be transparent.

Stylistic amendments are made to the exposure step and for antecedent basis. The applying step is amended to recite that the metal is applied after laser radiation exposure and is “reflective except for the portion exposed to laser radiation that defines a pre-selected matt zone that is not reflective.” Support for these claim amendments is found throughout the application as originally filed, including at page 5, lines 15-22 and page 10, lines 15-17 and 27-28.

New independent claim 32 relates to a method of manufacturing right and left-side headlamp reflectors from a single mold and recites, *inter alia*, “injection molding a plastic material in a single mold to provide two identical components,” “metallizing the inner faces of the two identical components to provide two metallized components that reflect light rays emitted by a light source,” and “producing a right-side and a left-side headlamp reflector from the metallized components by selective laser ablation of the metallized inner faces to provide non-metallized zones that do not reflect light on the inner faces.” Support for this claim amendment is found throughout the application as originally filed, including at page 5, lines 25-30 page 10, lines 27-30 and page 11, lines 9-23.

New independent claim 32 is clearly patentable over each of the cited references since none of these references teaches, discloses or suggests “producing a right-side and a left-side headlamp reflector from the metallized components by selective laser ablation of the metallized inner faces to provide non-metallized zones that do not reflect light on the inner faces” as recited by Applicants’ claim.

No new matter will be added to this application by entry of these amendments.

The office action raised a number of formal rejections. As to the specification, a new matter rejection was made regarding the use of the word “grainings” on page 1. [10/3/07 Office Action at p. 3]. That term has been deleted from that paragraph of the specification. In doing so, Applicants are not in any way conceding that correctness of the rejection, but rather are endeavoring to advance prosecution and to avoid delays.

Likewise, the Office Action requested that the specification be reviewed to identify and correct informalities. [10/3/07 Office Action at pp. 9-10]. This has been done. Withdrawal of the objections to the specification is requested.

A number of Section 112 rejections also were made. First, as to claims 1-6, 21-27 and 29-30, the Office Action said it was unclear whether the reflector or mask was an intermediate product or the final product in those claims, which rendered the claims indefinite. [10/3/07 Office Action at pp. 4-7]. This rejection is now moot as claims 1-5, 21-27 and 29-30 are cancelled, and claim 6 is amended to depend from claim 28.

Second, as to claims 28-29 and 31, the office action alleged that these claims suffered from a lack of enablement because the specification only enabled the manufacture of reflectors for motor vehicles and not for other purposes. [10/3/07 Office Action at p. 7]. Again, without addressing the Examiner's interpretation of the state of the art and the supposed limits of Applicants' specification, claim 28 is amended to clarify that it relates to "motor vehicle reflector." This claim relates to subject matter that the Office Action has conceded is enabled. Claim 29 is cancelled, thereby mooting the rejection. Withdrawal of the rejection as to claims 28 and 31 is requested.

Third, claims 1-6, 17-22, 24-29 and 31 were rejected for an alleged lack of written description. [10/3/07 Office Action at pp. 8-9]. The rejection of claims 1-5, 22, 24-27 and 29 is moot in light of their cancellation. As to claim 17, the language regarding reducing parasitic reflection has been deleted from the claim, which is believed to moot the rejection as to claim 17. The alleged concern regarding claims 28 and 31 has been addressed above. Withdrawal of the rejection of claims 6, 17, 28 and 31 is requested.

As to the merits, numerous rejections were stated in the office action as follows:

- Claims 1 and 5-6 were rejected pursuant to 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,817,243 to Shaffer et al. ("Shaffer") [10/3/07 Office Action at pp. 10-12].
- Claims 1 and 6 were rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,614,338 to Pyburn et al. ("Pyburn"). [10/3/07 Office Action at pp. 12-13].

- Claims 1 and 5-6 were rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,911,317 to Tsai (“Tsai”) in view of Pyburn. [10/3/07 Office Action at pp. 13-14].
- Claims 2-4 were rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over Shaffer in view of Great Britain Patent No. 2,244,934 to Pope (“Pope”) or U.S. Patent Publication 2004/0145289 to Ouderkirk et al. (“Ouderkirk”). [10/3/07 Office Action at pp. 14-16].
- Claims 1-4 and 6 were rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over Japanese Patent Publication No. 2000-176659 to Shizuku Hideji (“Hideji”) or Tsai in view of Pyburn and U.S. Patent Publication No. 2001/0019013 to Weber et al. (“Weber”). [10/3/07 Office Action at pp. 16-17].
- Claims 1 and 25 were rejected pursuant to 35 U.S.C. § 102(a) as allegedly being anticipated by U.S. Patent Publication No. 2002/0071940 to Arnold et al. (“Arnold”). [10/3/07 Office Action at pp. 18-20].
- Claims 1 and 24-25 were rejected pursuant to 35 U.S.C. § 102(e) as allegedly being anticipated by, or in the alternative pursuant to 35 U.S.C. § 103(a) as unpatentable over, U.S. Patent No. 6,521,326 to Fischer et al. (“Fischer”). [10/3/07 Office Action at pp. 20-21].
- Claims 2, 5-6, 17, 19-21 and 26-27 were rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over Fischer in view of Shaffer. [10/3/07 Office Action at pp. 20-21].
- Claims 3-4, 18, 22, and 28-31 were rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over Fischer in view of Shaffer and either U.S. Patent No. 6,017,138 to Reiss et al. (“Reiss”) or 4,954,422 to Lamprecht (“Lamprecht”). [10/3/07 Office Action at pp. 22-23].

Applicants note with appreciation the withdrawal of the prior rejections of independent claim 17 (as well as other claims dependent therefrom) in view of Shaffer, Pyburn and Tsai in view of Pyburn. Below, the rejections of independent claims 17 and 28 are addressed. Not addressed are the rejections of independent claim 1 and its dependent claims. Those rejections are moot in light of the claims cancelled by this paper.

B. Claims 6 and 17 are Patentably Distinct from the Cited References

The rejections of independent claim 17 are traversed. The cited references (Arnold, Shaffer and Fischer) taken alone or in combination fail to teach disclose or suggest all of the features of Applicants' claims. Metallization after laser radiation exposure is simply not disclosed in the cited references.

Applicants' claim 17 recites:

“17. A method of manufacturing a mask for motor vehicle headlamps adapted to emit a predetermined light beam, the method comprising:

providing a component of a motor vehicle headlamp, the component defining at least one orifice for holding a motor vehicle headlamp lens;

exposing at least one surface of said component to laser radiation to texture said component; and

metallizing said component after laser radiation exposure,

wherein the textured surface of the component after metallization provides a matt zone that does not reflect light.”

Arnold is directed to multi-layered structures. A metallized layer can be deposited on at least one side of a substrate that has already been shaped. [Arnold

¶0020]. Alternatively, an injection molded resin can be deposited onto the substrate and/or metal layer. [Arnold ¶0021].

Arnold's disclosures relating to laser radiation exposure are limited. The Office Action states the laser "heating" of a metal layer is disclosed by Arnold:

"it is taught that the metallized layer is grounded with a 'ground trace', which may be attached by various methods, inclusive of laser melting or laser heating, that is used to melt or soften a portion of the metal layer that [is] disposed over the ground" [10/3/07 Office Action at p. 19 (citing Arnold's paragraphs 24 and 64)].

As contemplated by the Office Action's statement, these discussions of laser heating require that the metal layer is deposited *first* and only thereafter is the laser radiation applied. Accordingly, Arnold fails to teach, disclose or suggest "metallizing said component after laser radiation exposure," as recited in Applicants' claim 17.

Fischer is directed to welded composites of glass-fiber reinforced molded parts that are composed of at least two moldings that are welded together by, for example, laser welding. As conceded by the Office Action, "the teachings of Fischer et al. do not indicate whether the laser scribing would have been preformed [sic] before or after metallization." [10/3/07 Office Action at p. 21]. Accordingly, it is undisputed that Fischer fails to teach, disclose or suggest "metallizing said component after laser radiation exposure," as recited in Applicants' claim 17.

Shaffer is directed to a method of applying decorative contrast designs to automotive and motorcycle parts (e.g., chrome plated motorcycle gas cap, plastic lens for motorcycle lamp, chrome coated glass mirror) using lasers. Specifically, a laser (1) is

used to etch “permanent decorative contrast design 12” into a part (11). [Shaffer, Col. 1, lines 36-45 and Col. 2, lines 47-57].

As the Office Action notes, in one of Shaffer’s embodiments the parts may “mirrored” (metal plated). [10/3/07 Office Action at p. 21]. In that instance, the laser may be used to ablate portions of the mirror coating:

“The laser beam may be directed to the back coated surface to remove portions of the [mirror] coated surface. Also, the laser beam may be directed through the front surface of the glass mirror and then ‘blast off’ or ablate portions of the back [mirror] coating.” [Shaffer, Col. 5, lines 20-24; see also Col. 2, lines 27-29].

Shaffer’s Example 5 describes an embodiment where metal plated glass mirrors are subjected to his methods. In that example, “[a] chrome coated glass mirror” is subjected to a laser beam so “laser etch” the “coated mirror surface.” [Col. 7, line 62 – Col. 8, line 3]. In these embodiments, mirrored or metallized parts are subject to laser treatment. Metallization occurs prior to laser treatment. None of this disclosure suggests metallization after the laser exposure step.

It is true, however, that the mirrored and etched embodiments of Shaffer may be subject to further manufacturing steps to enhance the image contrast:

“When the part is mirrored glass, the contrast is enhanced by applying a coating to the etched mirror backing. The coating may be any color paint as desired, or may be a holographic sheet When the coated reflective backing of the mirror has been ablated, the design may be coated by painting or by applying a holographic coating to add to the decorative and highly contrasting appearance.” [Col. 5, lines 15-18 and 27-31; see also Col. 8, lines 3-6].]

Again, however, none of this disclosure teaches metallization after the laser exposure step. Shaffer fails to teach, disclose or suggest “metallizing said component after laser radiation exposure,” as recited in Applicants’ claim 17.

Whether sounded under Section 102 for anticipation or under Section 103 for obviousness, the rejections cannot stand. None of the cited references discloses the “metallizing ... after laser radiation exposure” as recited in Applicants’ independent claim 17. Respectfully, Applicants’ independent claim 17 is asserted to be patentably distinct from Arnold in view of Shaffer, and from Fischer in view of Shaffer for at least these reasons. For at least similar reasons, dependent claim 6 also is patentably distinct.

C. Claims 28 and 31 are Patentably Distinct from the Cited References

The rejection of independent claim 28 also is traversed since the cited references (Fischer, Shaffer and either Reiss or Lamprecht) taken alone or in combination fail to teach disclose or suggest all of the features of Applicants’ claims.

Applicants’ claim 28 recites:

“28. A method of providing a motor vehicle reflector having at least one pre-selected matt zone, the method comprising:

injection molding a thermoplastic material into a predetermined shape having a surface;

exposing a portion of the surface to laser radiation to texture the portion of the surface; and

applying a metal layer onto the surface of the laser radiation exposed material, the metal layer of the material being reflective except for the portion exposed to laser radiation that defines a pre-selected matt zone that is not reflective.”

As discussed above in connection with claims 6 and 17, neither Fischer nor Shaffer discloses metallizing after laser radiation exposure. Therefore, these references fail to teach, disclose or suggest “applying a metal layer onto the surface of the laser radiation exposed material, the metal layer of the material being reflective except for the portion exposed to laser radiation that defines a pre-selected matt zone that is not reflective,” as recited in Applicants’ claim 28.

Reiss is directed to a motor vehicle headlamp with a cut-off line reflector and two masks that define two shadow zones on the reflector. Rather than disclosing the modification of the reflector itself, Reiss discloses something very different -- applying “opaque paint” to *the discharge lamp (2)*. [Reiss, Col. 4, lines 49-54]. Reiss contains no discussion of lasers or of metallizing motor vehicle reflectors. Reiss fails to teach, disclose or suggest “applying a metal layer onto the surface of the laser radiation exposed material, the metal layer of the material being reflective except for the portion exposed to laser radiation that defines a pre-selected matt zone that is not reflective,” as recited in Applicants’ claim 28.

Lamprecht is directed to a photosensitive recording material having a base, a particulate layer on top of the base, and a metallic layer on top of the particulate layer. Lamprecht is *not* addressing the manufacture of motor vehicle headlamp reflectors. Instead, this disclosure “relates to a photosensitive recording material for recording information ... under the action of light having a high energy density.” [Col. 1, lines 8-12]. In the photosensitive record material arts, Lamprecht states that use of “coherent

metal layers” is problematic because of the relatively high reflectance. [Col. 1, lines 34-46].

Applicants respectfully submit that the citation of Lamprecht in a Section 103 rejection is improper because it constitutes non-analogous art. *See* MPEP § 2141.01(a). Lamprecht is clearly not within the present inventors’ field of endeavor, and is not reasonably pertinent to the particular problem with which the present inventors were involved. *See In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1061 (Fed. Cir. 1992).

In any case, Lamprecht is clearly distinguished from Applicants’ claim 28. The Office Action points to the alleged disclosure by Lamprecht that the plastic substrate may be texturized by laser interferometry prior to metallization. [10/3/07 Office Action at p. 23 (citing Col. 1, lines 47-52). This is being done to avoid the problems of highly reflective metal layers, which is touted as a novel and important feature of Lamprecht’s disclosed embodiments:

“The novel recording materials are distinguished by little or no reflectivity in the entire spectral range from 200 nm to 2 μ m” [Col. 2, lines 27-29]; and

“[A]n important property of the novel recording material is the drastic reduction in the reflectivity of the metallic layer” [Col. 4, lines 57-60].

Thus, Lamprecht fails to teach, disclose or suggest “applying a metal layer onto the surface of the laser radiation exposed material, the metal layer of the material

being reflective except for the portion exposed to laser radiation that defines a pre-selected matt zone that is not reflective,” as recited in Applicants’ claim 28.

None of the cited references discloses the metal layer application step as recited in Applicants’ independent claim 28. Respectfully, Applicants’ independent claim 28 is asserted to be patentably distinct from Fischer in view of Shaffer, and further in view of either Reiss or Lamprecht for at least these reasons. For at least similar reasons, dependent claim 31 also is patentably distinct.

Applicants have chosen in the interest of expediting prosecution of this patent application to distinguish the cited documents from the pending claims as set forth above. These statements should not be regarded in any way as admissions that the cited documents are, in fact, prior art. Finally, Applicants have not specifically addressed the rejections of the dependent claims. Applicants respectfully submit that the independent claims, from which they depend, are in condition for allowance as set forth above. Accordingly, the dependent claims also are in condition for allowance. Applicants, however, reserve the right to address such rejections of the dependent claims in the future as appropriate.


Appl. No. 10/729,184
Paper dated April 3, 2008
Reply to Office Action dated Oct. 3, 2007

CONCLUSION

For the above-stated reasons, this application is respectfully asserted to be in condition for allowance. An early and favorable examination on the merits is requested. In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 13-4500, ORDER NO. 1948-4826.

Dated: April 3, 2008

Respectfully submitted,
MORGAN & FINNEGAN, L.L.P.
By: 
Matthew K. Blackburn
Registration No. 47,428

Correspondence Address:
MORGAN & FINNEGAN, L.L.P.
3 World Financial Center
New York, NY 10281-2101
(212) 415-8700 Telephone
(212) 415-8701 Facsimile